SOYO TechAID

Version: V1.0

Introduction

Congratulations on you purchase of the SOYO TechAID. Before you begin using this product, please take some time to read this user guide as it will illustrate the steps for installing and using your new TechAID.

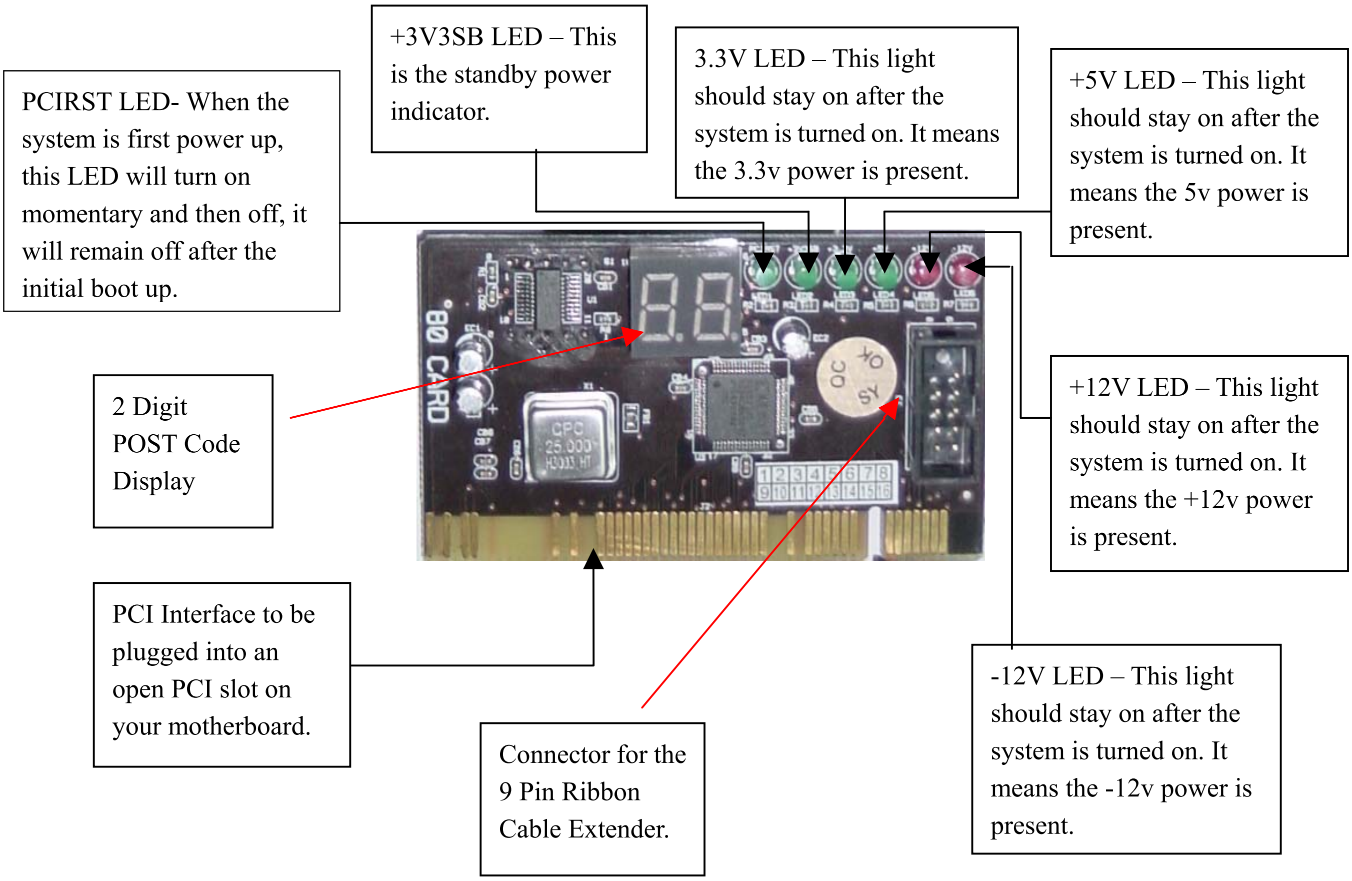
The purpose of the Soyo TechAid is to make the difficult troubleshooting procedure easier and quicker. This debugging card will assist any technicians (from novice to advance users) in accurately and conveniently locating their hardware problems faster, cutting down the troubleshooting time drastically simply by displaying an easy to follow POST (Power On Self Test) code on its display.

Unpacking your new TechAID:

Your Soyo TechAID should contain the following items:

1) Soyo TechAID
2) Mini Display Card
3) 9 Pin Ribbon Cable
4) Installation Guide

Device Description:



+3V3SB LED – This is the standby power indicator.

3.3V LED – This light should stay on after the system is turned on. It means the 3.3v power is present.

+5V LED – This light should stay on after the system is turned on. It means the 5v power is present.

PCIRST LED- When the system is first power up, this LED will turn on momentary and then off, it will remain off after the initial boot up.

2 Digit POST Code Display

+12V LED – This light should stay on after the system is turned on. It means the +12v power is present.

PCI Interface to be plugged into an open PCI slot on your motherboard.

Connector for the 9 Pin Ribbon Cable Extender.

-12V LED – This light should stay on after the system is turned on. It means the -12v power is present.

Installation Procedure:

1. With the system power off, insert the TechAID card into one of the open PCI slots on your motherboard.

2. Power on the system and troubleshoot any power supply problems you may have by using the 6 LEDs on the debugger card. The 6 LEDs on the card represent PCIRST, +3V3SB, +3.3V, +5V, +12V, and –12v.

   a) PCIRST LED- When the system is first power up, this LED will turn on momentary and then off, it will remain off after the initial boot up. It will stay on if one of the following is true 1) the reset switch is defective, try disconnect the reset switch. 2) power supply is defective or 3) the motherboard is defective or grounded to the case.
   b) +3V3SB LED – This is the standby power indicator. It will be lit only if the power plug is plugged into the motherboard, the on/ff switch on the power supply turn on, and the +3v standby power is present.

   c) 3.3V LED – This light should stay on after the system is turned on. It means the 3.3v power is present.

   d) +5V LED – This light should stay on after the system is turned on. It means the 5v power is present.

   e) +12V LED – This light should stay on after the system is turned on. It means the +12v power is present.

   f) -12V LED – This light should stay on after the system is turned on. It means the -12v power is present.

3. If any of the above LED is not working as indicated, please verify the problem accordingly.

4.As the computer continues to boot, POST codes will be displayed on the debugger card. Each POST code represents something. You can look up the meaning of the code in the POST code list.

5. For example, if the POST card displays “C1,” it means that something may be wrong with your DRAM module and its functionality needs to be inspected.

The following table consists of some of the most common POST Codes. For a complete definition, please refer to the POST Code List follow.

Most Common POST Codes

POST CODE	***Cause***	***BIOS POST message***	***Solution***
FF, 00	CPU	Check the functionality of the CPU.	1. Check Power connecter and make sure it is fully seated to the motherboard power socket. If you have a Pentium 4 motherboard, please make sure the 12V 4-pin square prong is connected to the motherboard. 2. Remove the board from the case and make sure it s not short-circuited to the case. 3. Change CPU (preferably with a CPU with the same speed). Inspect and clean the CPU socket and pins on the CPU 4. Make sure the CPU is inserted fully and seated properly in the socket. Try to reseat your CPU if necessary. 5. Check with your Motherboard Manufacturer as well, as your BIOS may be corrupted.
C1, C6, 31, 4E	Memory	Setting up the DRAM refresh rate, and inspecting the functionality of the DRAM controller	1.Make sure the memory module is seated fully in into the socket. 2.Make sure the memory module is not inserted backward. 3.Change and clean the DRAM module contact. Try replacing the module with a known good DRAM module.
41	BIOS	Setting up the BIOS controller	1. Clear CMOS and try turning system on again. 2. Replace BIOS chip as your current chip may be damaged or corrupted.
	Motherboard	Codes that are not listed in the above list	Motherboard error, please call your board manufacturer for assistance.

AMI BIOS POST Code Listing v6.2.4

POST Code	AMI WinBIOS uncompress code checkpoints Description
D0	NMI is Disabled. CPU ID saved. Init code Checksum verification starting.
D1	To do DMA init, keyboard controller BAT test, start memory refresh and going to 4Gbflat mode.
D3	TO start memory sizing.
D4	TO comeback to real mode. Execute OEM patch. Set stack.
D5	E000 ROM enabled. Init code is copied to segment 0 and control to be transferred to segment 0.
D6	Control is in segment 0.To check<CTRL><HOME>key and verify main BIOS checksum. IF either <CTRL><HOME>is pressed or main IOS checksum is bad, go to check point E0 else go to check point D7.
D7	To pass control to Interface Module.
D8	Main BIOS runtime code is to be decompressed.
D9	Control to be passed to main BIOS in shadow RAM.

Runtime code is uncompressed in F000 shadow ram

POST Code	AMI HiFLEX BIOS/WinBIOS runtime code Description
E0	Onboard floppy controller (if any) is initialzed. To start base 512K memory test.
E1	To initialize interrupt vector table.
E2	To initialize DMA and interrupt controllers.
E6	To enable floppy and timer IRQ, enable internal cache.
ED	Initialize floppy drive.
EE	Start looking for diskette in drive A: and read 1st sector of the diskette.
EF	Floppy read error.
F0	Start searching ‘AMIBOOT.ROM’ file in root directory.
F1	MIBOOT.ROM’ file not present in root directory.
F2	Start reading FAT table and analyze FAT to find the clusters occupied by MIBOOT.ROM’ file..
F3	Start reading MIBOOT.ROM’ file cluster by cluster.
F4	MIBOOT.ROM’ file not of proper size.
F	Disable internal cache.
FB	Detect flash type present.
FC	Erase flash.
FD	Program flash.
FF	Flash Program successful BIOS is going to restart Runtime code is uncompressed in F000 shadow ram.
03	Power on delay complete. To check soft rest/power-on.
05	Soft reset/power-on determined. Going to disable Cache if any.
06	POST code to be uncompressed.
07	POST code is uncompressed. CPU init and CPU data area init to be done next
08	CPU and CPU data area init done. CMOS checksum calculation to be done next.
0B	CMOS status register init done. Any initialization before keyboard BAT to be done next.
0C	KB controller I/B free. Going to issue the BAT command to keyboard Controller.
0E	Keyboard controller BAT result verified. Any initialization after KB controller BAT to be done next.

0F	Initialization after KB controller BAT done. Keyboard command byte to be written next.
10	Keyboard controller command byte is written. Going to issue Pin-23 ,24 blocking/unblocking command.
11	Pin-23,24 of keyboard controller is blocked/ unblocked. Going to check pressing of <INS><END> key during power-on.
12	Checking for pressing of <END> key during power-on done. Going to disable DMA and Interrupt controllers.
13	DMA controller #1,#2, interrupt controller #1,#2 disabled. Video display is disabled and port-B is initialized. Chipset init about to Begin.
14	8254 timer test about start.
19	8254 timer test over . About to start memory refresh test.
1A	Memory Refresh line is togging . going to check15 micro second ON/OFF
20	Memory Refresh period 30 micro second test complete. Base 64K memory to be initialized.
23	To read 8042 input port and disable Megakey Green PC feature. Make bios code segment writeable.
24	To do any setup before Int vector init.
25	Interrupt vector initialization done. Going to read Input port of 8042 for turbo switch (of any) and to clear password if post diag switch is on.
27	Any initialization before setting video mode to be done next.
28	Initialization before setting video mode is complete. Going for monochrome mode and color mode setting.
2A	Different BUSes init (system, static, output devices) to start if present. (Please see next section for details of different BUSes).
2B	About to give control for any setup required before optional video ROM check.
2C	Processing before video ROM control is done. About to look for optional video ROM and give control.
2D	Optional video ROM control is done. About to give control to do any processing after video ROM returns control.
2E	Return from processing after the video ROM control. If EGA/VGA not found then do display memory R//w test.
2F	EGA/VGA not found. Display memory R/W test about to begin.
30	Display memory R/W test passed. About to look for the retrace checking.
31	Display memory R/W test or retrace checking failed. About to do alternate Display memory R/W test.
32	Alternate Display memory R/W test passed. About to look for the alternate display retrace checking.
34	Video display checking over. Display mode to be set next.
37	Display mode set. Going to display the power on message.
38	Different BUSes init (input, IPL, general devices)to start if present. (Please see next section for details of different BUSes).
39	Display different BUSes initialization error messages. (Please see Appendix for details of different BUSes).
3A	New cursor position read and saved. Going to display the Hit <DEL> message.
40	Going to prepare the descriptor tables.
42	Descriptor tables prepared. Going to enter in virtual mode for memory test.
43	Entered in the virtual mode. Going to enable interrupts for diagnostics mode.
44	Interrupts enabled (if diagnostics switch is on).

45	Data initialized. Going to check for memory wrap around at 0:0 and finding the total system memory size.
46	Memory wrap around test done. Memory size calculation over. About to go for writing patterns to test memory.
47	Pattern to be tested written in extended memory. Going to write patterns in base 640k memory.
48	Patterns written in base memory. Going to find out amount of memory below 1M memory.
49	Amount of memory below 1M found and verified. Going to find out amount of memory above 1M memory.
4B	Amount of memory above 1M found and verified. Check for soft reset and going to clear memory below 1M memory.
4C	Memory below 1M cleared.(SOFT RESET) Going to clear memory above 1M.
4D	Memory above 1M cleared.(SOFT RESET) Going to save the memory size. (Go to check point# 52h).
4E	Memory test started. (NOT SOFT RESET)About to display the first 64k memory size.
4F	Memory size display started. This will be updated during memory test. Going for sequential and random memory test.
50	Memory testing/initialization below 1M complete. Going to adjust displayed memory size for relocation/ shadow.
51	Memory size display adjusted due to relocation/ shadow. Memory test above 1M to follow.
52	Memory testing/initialization above 1M complete Going to save memory size information.
53	Memory size information is saved. CPU registers are saved. Going to enter in real mode.
54	Shutdown successful, CPU in real mode. Going to disable gate A20 line and disable parity/NMI.
57	A20 address line, parity/NMI disable successful. Going to adjust memory size depending on relocation/shadow.
58	Memory size adjusted for relocation/shadow. Going to clear Hit <DEL> message.
59	Hit <DEL> message cleared. <WAIT…>message displayed. About to start DMA and interrupt controller test.
60	DMA page register test passed. To do DMA#1 base register test.
62	DMA#1 base register test passed. To do DMA#2 base register test.
65	DMA#2 base register test passed. TO program DMA unit 1and 2.
66	DMA unit 1 and 2 programming over. To initialize 8259 interrupt controller.
67	8259 /initialization over.
7F	Extended NMI sources enabling is in progress.
80	Keyboard test started. Clearing output buffer, checking for stuck key, About to issue keyboard reset command,
81	Keyboard reset error/stuck key found. About to issue keyboard controller interface test command.
82	Keyboard controller interface test over. About to write command byte and init circular buffer.
83	Command byte written, Global date init done. About to check for lock-key.
84	Lock-key checking over. About to check for memory size mismatch with CMOS.
85	Memory size check done. About to display soft error and check for password or bypass setup.
86	Password checked About to do programming before setup.

87	Programming before setup complete. Going to uncompress SETUP code and execute CMOS setup.
88	Returned from CMOS setup program and screen is cleared. About to do programming after setup.
89	Programming after setup complete. Going to display power on screen message.
8B	First screen message displayed <WAIT…>message displayed. About to do Video BIOS shadow.
8C	Video BIPS shadow successful. Setup options programming after CMOS setup about to start.
8D	Going for hard disk controller reset.
8F	Hard disk controller reset done. Floppy setup to be done next.
91	Floppy setup complete. Hard disk setup to be done next.
95	Memory size adjusted due to mouse support. Init of different BUSes optional ROMs from C800 to start. (Please see next section for details of different BUSes).
96	Going to do any init before C800 optional ROM control.
97	Any init before C800 optional ROM control is over. Optional ROM check and control will be done next.
98	Optional ROM control is done. About to give control to do any required processing after optional ROM returns control.
99	Any initialization required after optional ROM test over. Going to setup timer data area and printer base address.
9A	Return after setting timer and printer base address. Going to set the RS-323 base address.
9B	Returned after RS-323 base address. Going to do any initialization before Coprocessor test.
9C	Required initialization before Coprocessor is over. Going to initialize the Coprocessor next.
9D	Coprocessor initialized. Going to do any initialization after Coprocessor test.
9E	Initialization after Coprocessor test is complete. Going to check extd keyboard, keyboard ID and num-lock.
A2	Cache memory test over. Going to display any soft errors.
A3	Soft error display complete. Going to set keyboard typematic rate.
A4	Keyboard typematic rate set. To program memory wait states.
A5	Memory wait states programming over. Going to clear the screen and enable parity/NMI.
A7	NMI and parity enabled. Going to do any initialization required before giving control to optional ROM at E000.
A8	Initialization before E000 ROM control over . E000 ROM to get control next.
A9	Returned from E000 ROM control. Going to do any initialization required after E000 optional ROM control.
AA	Initialization after E000 optional ROM control is over. Going to display the system configuration.
AB	To build mp table if needed.
AC	To uncompress DMI data and execute DMI POST init.
B0	System configuration is displayed.
B1	Going to copy any code to specific area.
00	Copying of code to specific area done. Going to give control to INT-19 boot loader.

For more information about AMI BIOS please refer to the Award website at http://www.ami.com.tw/

AWARD BIOS POST Code Listing v6.0

POST (hex)	Description
CFh	Test CMOS R/W functionality.
C0h	Early chipset initialization: -Disable shadow RAM -Disable L2 cache (socket 7 or below) -Program basic chipset registers
C1h	Detect memory -Auto-detection of DRAM size, type and ECC. -Auto-detection of L2 cache (socket 7 or below)
C3h	Expand compressed BIOS code to DRAM
C5h	Call chipset hook to copy BIOS back to E000 & F000 shadow RAM.
01h	Expand the Xgroup codes locating in physical address 1000:0
02h	Reserved
03h	Initial Superio_Early_Init switch.
04h	Reserved
05h	1. Blank out screen 2. Clear CMOS error flag
06h	Reserved
07h	1. Clear 8042 interface 2. Initialize 8042 self-test
08h	1. Test special keyboard controller for Winbond 977 series Super I/O chips. 2. Enable keyboard interface.
09h	Reserved
0Ah	1. Disable PS/2 mouse interface (optional). 2. Auto detect ports for keyboard & mouse followed by a port & interface swap (optional). 3. Reset keyboard for Winbond 977 series Super I/O chips.
0Ch	Reserved
0Dh	Reserved
0Eh	Test F000h segment shadow to see whether it is R/W-able or not. If test fails, keep beeping the speaker.
0Fh	Reserved
10h	Auto detect flash type to load appropriate flash R/W codes into the run time area in F000 for ESCD & DMI support.
11h	Reserved
12h	Use walking 1's algorithm to check out interface in CMOS circuitry. Also set real-time clock power status, and then check for override.
13h	Reserved
14h	Program chipset default values into chipset. Chipset default values are MODBINable by OEM customers.
15h	Reserved
16h	Initial onboard clock generator if Early_Init_Onboard_Generator is defined. See also POST 26h.
17h	Reserved
18h	Detect CPU information including brand, SMI type (Cyrix or Intel) and CPU level (586 or 686).
19h	Reserved
1Ah	Reserved

POST (hex)	Description
1Bh	Initial interrupts vector table. If no special specified, all H/W interrupts are directed to SPURIOUS_INT_HDLR & S/W interrupts to SPURIOUS_soft_HDLR.
1Ch	Reserved
1Dh	Initial EARLY_PM_INIT switch.
1Eh	Reserved
1Fh	Load keyboard matrix (notebook platform)
20h	Reserved
21h	HPM initialization (notebook platform)
22h	Reserved
23h	1.Check validity of RTC value: e.g. a value of 5Ah is an invalid value for RTC minute. 2. Load CMOS settings into BIOS stack. If CMOS checksum fails, use default value instead.3. Prepare BIOS resource map for PCI & PnP use.If ESCD is valid, take into consideration of the ESCD's legacy information.4.onboard clock generator initialization. Disable respective clock resource to empty PIC&DIMM slots. 5.Early PCI Initialization: -Enumerate PCI bus number. -Assign memory & I/O resource -Search for a valid VGA device & VGA BIOS, and put it into C000:0
24h	Reserved
25h	Reserved
26h	Reserved
27h	Initialize INT 09 buffer
28h	Reserved
29h	1. Program CPU internal MTRR (P6 & PII) for 0-640K memory address. 2. Initialize the APIC for Pentium class CPU. 3. Program early chipset according to CMOS setup. Example: onboard IDE controller. 4. Measure CPU speed. 5. Invoke Video BIOS.
2Ah	Reserved
2Bh	Reserved
2Ch	Reserved
2Dh	1. Initialize double-byte language font (Optional) 2. Put information on screen display, including Award title, CPU type, CPU speed, full screen logo.
2Eh	Reserved
2Fh	Reserved
30h	Reserved
31h	Reserved
32h	Reserved
33h	Reset keyboard if Early_Reset_KB is defined e.g. Winbond 977 series Super I/O chips. See also POST 63h.
34h	Reserved
35h	Reserved
36h	Reserved
37h	Reserved
38h	Reserved

POST (hex)	Description
39h	Reserved
3Ah	Reserved
3Bh	Reserved
3Ch	Test 8254
3Dh	Reserved
3Eh	Test 8259 interrupt mask bits for channel 1.
3Fh	Reserved
40h	Test 8259 interrupt mask bits for channel 2.
41h	Reserved
42h	Reserved
43h	Test 8259 functionality.
44h	Reserved
45h	Reserved
46h	Reserved
47h	Initialize EISA slot
48h	Reserved
49h	1. Calculate total memory by testing the last double word of each 64K page. 2. Program write allocation for AMD K5 CPU.
4Ah	Reserved
4Bh	Reserved
4Ch	Reserved
4Dh	Reserved
4Eh	1. Program MTRR of M1 CPU 2. Initialize L2 cache for P6 class CPU & program CPU with proper cacheable range. 3. Initialize the APIC for P6 class CPU. 4. On MP platform, adjust the cacheable range to smaller one in case the cacheable ranges between each CPU are not identical.
4Fh	Reserved
50h	Initialize USB.
51h	Reserved
52h	Test all memory (clear all extended memory to 0)
53h	Reserved
54h	Reserved
55h	Display number of processors (multi-processor platform)
56h	Reserved
57h	1. Display PnP logo 2. Early ISA PnP initialization -Assign CSN to every ISA PnP device.
58h	Reserved
59h	Initialize the combined Trend Anti-Virus code.
5Ah	Reserved
5Bh	(Optional Feature) Show message for entering AWDFLASH.EXE from FDD (optional)
5Ch	Reserved
5Dh	1. Initialize Init_Onboard_Super_IO 2. Initialize Init_Onbaord_AUDIO.
5Eh	Reserved
5Fh	Reserved

POST (hex)	Description
60h	Okay to enter Setup utility; i.e. not until this POST stage can users enter the CMOS setup utility.
61h	Reserved
62h	Reserved
63h	Reserved
64h	Reserved
65h	Initialize PS/2 Mouse
66h	Reserved
67h	Prepare memory size information for function call: INT 15h ax=E820h
68h	Reserved
69h	Turn on L2 cache
6Ah	Reserved
6Bh	Program chipset registers according to items described in Setup & Auto-configuration table.
6Ch	Reserved
6Dh	1. Assign resources to all ISA PnP devices. 2. Auto assign ports to onboard COM ports if the corresponding item in Setup is set to “AUTO”.
6Eh	Reserved
6Fh	1. Initialize floppy controller 2. Set up floppy related fields in 40:hardware.
70h	Reserved
71h	Reserved
72h	Reserved
73h	(Optional Feature) Enter AWDFLASH.EXE if: -AWDFLASH.EXE is found in floppy drive. -ALT+F2 is pressed.
74h	Reserved
75h	Detect & install all IDE devices: HDD, LS120, ZIP, CDROM…..
76h	Reserved
77h	Detect serial ports & parallel ports.
78h	Reserved
79h	Reserved
7Ah	Detect & install co-processor
7Bh	Reserved
7Ch	Init HDD write protect.
7Dh	Reserved
7Eh	Reserved
7Fh	Switch back to text mode if full screen logo is supported. -If errors occur, report errors & wait for keys -If no errors occur or F1 key is pressed to continue: ◆Clear EPA or customization logo.
80h	Reserved
81h	Reserved

E8POST.ASM starts	
82h	1. Call chipset power management hook. 2. Recover the text fond used by EPA logo (not for full screen logo) 3. If password is set, ask for password.
83h	Save all data in stack back to CMOS
84h	Initialize ISA PnP boot devices
85h	1. USB final Initialization 2. NET PC: Build SYSID Structure. 3. Switch screen back to text mode 4. Set up ACPI table at top of the memory. 5. Invoke all ISA adapter ROMs 6. Assign IRQs to PCI devices 7. Initialization APM 8. Clear noise of IRQs
86h	Reserved
87h	Reserved
88h	Reserved
89h	Reserved
90h	Reserved
91h	Reserved
92h	Reserved
93h	Read HDD boot sector information for Trend Anti-Virus code
94h	1. Enable L2 cache 2. Program boot up speed 3. Chipset final initialization. 4. Power management final initialization 5. Clear screen & display summary table 6. Program K6 write allocation 7. Program P6 class write combining
95h	1. program daylight saving 2. Update keyboard LED & typematic rate
96h	1. Build MP table 2. Build & update ESCD 3. Set CMOS century to 20h or 19h 4. Load CMOS time into DOS timer tick 5. Build MSIRQ routing table.
FFh	Boot attempt (INT 19h)

For more information about award BIOS please refer to the Award website at http://www.award.com.tw/

Pheonix BIOS POST Code Listing

POST Code	Phoenix POST Rountine Description
02	Verify Real Mode
04	Get CPU type
06	Initialize system hardware
08	Initialize chipset register with initial POST values
09	Set in POST flag
0A	Initialize CPU register
0C	Initialize cache to initial POST values
0E	Initialize 1/0 CPU register
0F	Initialize the local bus IDE
10	Initialize Power Management
11	Load alternate registers with initial POST values
12	Jump to UserPatch0
14	Initialize keyboard controller
16	BIOS ROM checksum
18	8254 timer initialization
1A	8237 DMA controller initialization
20	Test DRAM refresh
22	Test 8042 keyboard controller
24	Set ES segment register to 4 GB
28	Autosize DRAM
2A	Clear 512K base RAM
2C	Test 512K base address lines
2E	Test 512K base memory
32	Test CPU bus-clock frequency
34	Test CMOS RAM
35	Initialize alternate chipset registers
37	Reinitialize the chipset
38	Shawdow system BIOS ROM
39	Reinitialize the cache
3A	Autosize cache
3C	Configure advanced chipset registers
3D	Load alternate registers with CMOS values
40	Set initial CPU aped
42	Initialize interrupt vectors
44	Initialize BIOS interrupts
46	Check ROM copyright notice
47	Initialize manager for PCI Option ROMs
48	Check video configuration against CMOS
49	Initialize PCI bus and devices
4A	Initialize all video adapters in system
4C	Shadow video BIOS ROM
4E	Display copyright notice

POST Code	Phoenix POST Rountine Description
50	Display CPU type and speed
51	Initialize EISA board
52	Test keyboard
54	Set key click if enabled
56	Enable keyboard
58	Test for unexpected interrupts
5A	Display prompt ”Press F2 to enter SETUP”
5C	Test RAM between 512to 640K
60	Test extended memory
62	Test extended memory address lines
64	Jump to UserPatsh1
66	Configure advanced cache registers
68	Enable external and CPU cache
6A	Display external cache size
6C	Display shadow message
6E	Display non-disposable segments
70	Display error messages
72	Check for configuration errors
74	Test real-time clock
76	Check for keyboard errors
7C	Setup hardware interrupt vectors
7E	Test corprocessor if presents
80	Disable onboard I/O ports
82	Detect and install external RS-232 ports
84	Detect and install external parallel ports
86	Re-initialize onboard I/O ports
88	Initialize BIOS Data Area
8A	Initialize Extended BIOS Data Area
8C	Initialize floppy controller
90	Initialize hard-disk controller
91	Initialize local-bus hard-disk controller
92	Jump to UserPatch2
93	Built MPTABLE for multi-processor boards
94	Disable A20 address line
96	Clear huge ES segment register
98	Search for option ROMs
9A	Shadow option ROMs
9C	Set up Power Management
9E	Enable hardware interrupts
A0	Set time of day
A2	Check key lock
A4	Initialize typematic rate
A8	Ease F2 prompt
AA	Scan for F2 stroke

POST Code	Phoenix POST Rountine Description
AC	Enter SETUP
AE	Clear in-POST flag
B2	POST done-prepare to boot operating system
B4	One beep
B6	Check password (option)
B8	Clear global descriptor table
BC	Clear parity checkers
BE	Clear screen (option)
BF	Clear virus and backup remainders
C0	Try to boot with INT19
D0	Interrupt handler error
D2	Unknown interrupt error
D4	Pending interrupt error
D6	Initialize option ROM error
D8	Shutdown error
DA	Extended BLOCK Move
DC	Shutdown 10 error

For more information about Phoenix BIOS please refer to the Phoenix website at http://www.phoenix.com

How to contact us:

- If you are interested in our products, please contact the SOYO sales department in the region you live.
- If you require Technical Assistance, please contact our Technical Support in the region you live.

SOYO prefers Email as communication medium, remember to *always add to the email the country that you live in*.

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